



In Re Application Of:

C. C. Gaydos;

R. S. Fortuna

Serial No.: 10/730,300

Page 2

IN THE SPECIFICATION:

Please amend Paragraph [0005] as follows:

[0005] There are also numerous variables existing in hatch covers used with known hopper cars.

Different railcar hatch openings can have different widths, different hinge pin to coaming distances, different hinge pin diameters, as well as different brackets. In view of these differences and other related variables, heretofore it has been practically impossible to provide a single hinge structure adaptable to all of these variables while maintaining a closed hatch cover in a sealed relationship relative to the railcar coaming. As such, replacement of the hinge structures to cooperate with the hinge brackets and/or replacement of the brackets on the car roof to cooperate with the hinge structures is required. Of course, replacement of either the hinge structures on the hatch covers or the hinge brackets on the railcar is a time consuming and tedious process. Moreover, due consideration needs to be given to the exposure of the hinge structures to weather related elements and the problems created by such weather related elements (*i.e.* corrosion) to the hinge structure components used to pivotally connect the hatch cover to the railcar.

Please amend Paragraph [0010] as follows:

[0010] To further enhance hinge structure versatility, a first end of the hinge structure has a generally planar configuration to promote attachment to various structures, *i.e.*, railcar hatch covers or the like, while the universal adapter comprises one of a plurality of interchangeable

In Re Application Of:

C. C. Gaydos;

R. S. Fortuna

Serial No.: 10/730,300

Page 3

apertured pieces releasably securable toward the second end of the hinge structure. Preferably, the second end portion of the hinge structure has ~~the~~ at least one of such pieces comprising the universal adapter releasably secured thereto in a manner inhibiting rotation of the apertured piece relative to the hinge structure. In a most preferred embodiment, the universal adapter comprises one of a plurality of modular inserts configured for interchangeability with other modular inserts within a socket arranged toward the second end of the hinge structure.

Please amend Paragraph [0011] as follows:

[0011] In accordance with another aspect ~~of the invention~~, there is provided hinge structure for connecting a hatch cover to a railcar. The hinge structure includes a first end configured for attachment to the hatch cover and a separate universal adapter arranged toward a second end of the hinge structure. According to this aspect, the universal adapter defines multiple openings disposed in spaced, generally parallel relation relative to each other whereby permitting pivotal attachment of the hinge structure and thereby said hatch cover to different brackets on the railcar having hinge pins arranged at different heights relative to coaming on the railcar.

Please amend Paragraph [0015] as follows:

[0015] In accordance with yet another aspect ~~of the invention~~, a hinge system is provided for connecting a first member to a second member for hinged movement about a fixed pivot axis.



In Re Application Of:

C. C. Gaydos;

R. S. Fortuna

Serial No.: 10/730,300

Page 4

The hinge system includes a first hinge piece connected to one of the first and second members, with the first hinge piece defining a reference plane, and a second hinge piece connected to the other of the first and second members. The second hinge piece accommodates a hinge pin defining the fixed pivot axis between the first and second members. Moreover, a separate universal adapter is releasably secured to one of the first and second pieces. The universal adapter defines multiple sleeve-like openings, each sized to accommodate a lengthwise portion of the hinge pin. The multiple openings in the adapter are at different distances relative to the reference plane on the first hinge piece such that differing second hinge pieces having the hinge pin disposed at differing distances from the reference plane of the first hinge piece are pivotally securable to the first hinge piece by moving the hinge pin to that opening in the universal adapter closely aligned to the axis of the hinge pin accommodated by the second hinge piece.

Please amend Paragraph [0017] as follows:

[0017] Preferably, the universal adapter comprises one of a plurality of modular inserts. In this embodiment, a first end portion of one of the first and second pieces is configured to releasably accommodate any one of the plurality of modular inserts in non-rotatable relation relative to each other. In a most preferred form, ~~the~~ one of the hinge pieces is configured with a socket for releasably accommodating and holding one of the modular inserts therein in non-rotatable relation relative to the hinge piece. Moreover, each modular insert has a plurality of hinge pin

In Re Application Of:

C. C. Gaydos;

R. S. Fortuna

Serial No.: 10/730,300

Page 5

accommodating openings arranging in a predetermined pattern. As will be appreciated, the pattern of openings in one modular insert differs from the pattern of openings in another modular insert.; Moreover, each opening in the insert defines a closed, generally circular marginal edge extending thereabout. To further promote versatility, the distance across the marginal edge defining the openings in the modular structures are of differing sizes relative to each other whereby allowing different inserts to accommodate hinge pins having differing diameters.

Please amend Paragraph [0018] as follows:

[0018] In accordance with still another aspect of the invention, there is provided a method for connecting a railcar hatch cover for hinged movements about a fixed axis to brackets having aligned openings for receiving a hinge pin defining the fixed axis. The method comprises the steps of: providing a hinge structure configured toward one end with a generally planar portion for facilitating attachment of the hinge structure to the hatch cover, with the planar portion on the hinge structure defining a reference plane; providing a plurality of adapters, each adapter being located toward a second end of the hinge structure, with each adapter including multiple openings arranged in generally parallel relationship relative to each other, and with each opening in the adapter being disposed a differing distance from the reference plane defined by the hinge structure, and wherein spacings between a majority of the openings in one adapter differ from the spacing between a majority of the openings in another adapter; and, selecting that adapter having

In Re Application Of:

C. C. Gaydos;

R. S. Fortuna

Serial No.: 10/730,300

Page 6

an opening disposed so as to proximate a distance measurable between the pivot axis defined by the aligned openings on the brackets and the hinge structure reference plane.

Please amend Paragraph [0019] as follows:

[0019] According to this aspect ~~of the invention~~, the openings in the various adapters each differ in size relative to each other. Moreover, and in accordance with this aspect ~~of the invention~~, each adapter is configured as a removable insert which is accommodated within a socket defined toward the second end of the hinge structure.

Please amend Paragraph [0021] as follows:

[0021] Another feature of the present invention relates to the provision of structure allowing for a hatch cover to be hingedly ~~connected~~ mounted to existing upstanding brackets on a railcar wherein some of the existing brackets may be different from each other or have different diameter hinge pins which may be located at differing heights relative to coaming on the railcar.

Please amend Paragraph [0022] as follows:

[0022] Still another feature of this invention relates to the provision of a low cost structure for connecting or mounting a railcar hatch cover to brackets of differing styles and wherein the structure includes an adapter allowing the structure to be used in different applications simply by

In Re Application Of:

C. C. Gaydos;

R. S. Fortuna

Serial No.: 10/730,300

Page 7

selecting that adapter configured to accommodate a particular hinge pin diameter and/or hinge pin location.

Please amend Paragraph [0031] as follows:

[0031] Referring now to the drawings, wherein like reference numerals indicate like parts throughout the several views, the present invention is shown arranged in combination with a covered railroad hopper car, generally designed by reference numeral 10. Railcar 10 includes a conventional box-like structure of rigid construction including a roof 12 having an elongated longitudinally extending hatch opening or trough 14. In one form, the opening 14 is defined toward a central portion of the roof 12 for loading granular materials or commodity into the railcar 10.

Please amend Paragraph [0036] as follows:

[0036] In accordance with the present invention, hinge structure 50 is provided for permitting the hatch covers 22A through 22D to be connected quickly and easily even to differing stationary brackets 34 on the railcar 10. That is, the hinge structure 50 of this invention advantageously allows the hatch cover assembly 20 to be mounted in operable combination with and connected to brackets 34 designed with hinge pin holes or openings 40 disposed at differing heights relative to the railcar coaming 30 as well as brackets 34 having different diameter hinge pins and differing

In Re Application Of:

C. C. Gaydos;

R. S. Fortuna

Serial No.: 10/730,300

Page 8

widths.

Please amend Paragraph [0037] as follows:

[0037] As shown in FIG. 2, hinge structure 50 is configured toward one end thereof to promote attachment of the hinge structure 50 to toward one side of the main panel 23 of the respective hatch cover associated therewith. As shown in FIGS. 2 and 3, hinge structure 50 has a separate universal adapter 60 located or arranged toward a second end thereof. As shown in FIGS. 2 and 3, the second end of the hinge structure 50, along with the adapter 60 carried thereby, is spaced from the one side of the main panel 23 to which the first end of the hinge structure 50 is attached. The universal adapter 60 is configured to promote attachment and mounting of hinge structure 50 and, thus, the respective hatch cover 50 to various brackets 34 as through a hinge pin 70 journaled by the arms 38, 38' of the brackets 34 and the universal adapter 60 of the hinge structure 50 whereby allowing for hinged movement of the hatch cover between closed and open positions and about a fixed axis 72 defined by hinge pin 70.

Please amend Paragraph [0044] as follows:

[0044] The axial spacing between the apertured inserts 60", 60" also adds to the versatility of the hinge structure 50. That is, the hinge pin brackets 34 secured to the railcar roof 12 (FIG. 2) can have different spacings between the upstanding arms 38, 38'. As shown in FIG. 4, the second end

In Re Application Of:

C. C. Gaydos;

R. S. Fortuna

Serial No.: 10/730,300

Page 9

portion of hinge structure 50 is preferably designed to be fit between and be embraced by the upright arms 38, 38' to which it is pivotally connected. The axial spacing between the inserts 60', 60" comprising the universal adapter 60 readily allows different hinge structure designs each having a width commensurate with the lateral spacing between the bracket arms 38, 38" to be ~~interchangeability~~ interchangeably used to connect the hatch cover to brackets of differing widths.

Please amend Paragraph [0051] as follows:

[0051] As mentioned, various hopper car constructions frequently use different hinge pin-to-coaming separation distances. Just a few examples of the various hopper car constructions having different hinge pin-to-coaming separation distances are schematically shown in FIG. 8. That is, in FIG. 8, various hinge pin locations and openings 40 are schematically illustrated (in phantom lines) relative to the coaming 30. As will be appreciated, either the width of the hatch opening 14 (FIG. 1) or the height of the coaming 30 can also change, depending upon the particular hopper car construction, thus, serving to exacerbate problems with interconnecting and mounting of the cover assembly 20 to the railcar while maintaining an appropriate sealing relationship between the cover assembly 20 and the railcar coaming 30. In addition, certain railcar constructions may also use brackets 34 having hinge pin holes or openings 40 sized to accommodate a hinge pin of a diameter larger or smaller than the hinge pins used to pivotally interconnect other hinge structures to the brackets. As will be appreciated, in the field, almost any available hinge pin will be used to

In Re Application Of:

C. C. Gaydos;

R. S. Fortuna

Serial No.: 10/730,300

Page 10

interconnect the hinge structure to the railcar brackets.